

CURRICULUM VITAE

Name: Kevin Piner
Present Position: Research Fishery Biologist
Organization: National Oceanic and Atmospheric Administration
Southwest Fisheries Science Center
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Education:

B.A. Texas A&M University at Galveston (1988) in Marine Fisheries
M.S. Texas A&M University (1993) in Wildlife and Fisheries Sciences
Ph.D. Old Dominion University (2000) in Ecological Sciences

Experience:

2012-present NMFS, Research Fishery Biologist Southwest Fisheries Science Center, La Jolla, Ca.
2009- 2012 NMFS, Research Fishery Biologist Pacific Island Fisheries Science Center Honolulu, Hi.
2003-2009 NMFS, Research Fishery Biologist Southwest Fisheries Science Center, La Jolla, Ca.
1999-2003 NMFS, Research Fishery Biologist. Northwest Fisheries Science Center, Seattle, Wa.

Research Interests:

- 1) Application and development of integrated fisheries population dynamics modeling
- 2) General Fisheries Ecology
- 3) Why are long-legged spiders so terrifying?

Honors and Awards:

Lechner Fellowship 1989
TUGCo Fellowship 1990
Best Paper, 1992 Texas A&M Chapter of the American Fisheries Society.
NOAA Bronze Medal 2008

Service on Professional Committees:

Pacific Fishery Management Council Groundfish Management Team (2001-2003)
Pacific Fishery Management Council Highly Migratory Species Management Team (2009)
Recreational Fisheries Information Network Standing Committee (2001-2003)
International Scientific Committee Billfish Working Group (2005-2012)
International Scientific Committee Shark Working Group (2012-2015)
International Scientific Committee Bluefin Tuna Working Group (2005-present)
International Scientific Committee Albacore Tuna Working Group (2005-present)
PFMC Science and Statistical Committee (2015- present)

Publications: General Fisheries Biology

In the fridge

- McDaniel, J., **K. Piner**, H.H. Lee, B., Macewicz, and K. Hill. (**in development**) Pacific sardine (*Sardinops sagax*) maturation an age- or length-based process? *CalCOFI Rpt.*
- Kai, M., J. T., Thorson, **K.R., Piner**, and M.N., Maunder. (**in prep**) Incorporation of length data for geostatistical model: application to Japanese shallow-set longline for shortfin mako shark (*Isurus oxyrinchus*). *Fish. Res.*
- Lee, H.H., **Piner, K.R.**, Maunder, M.N., and R.D. Methot Jr. (**in prep**) Evaluation of alternative modelling approaches for spatial effects due to movement *Can J. Fish Aquat Sci.*
- Sipple, T. H.H., Lee, **K.R., Piner**, and S. Teo (**in prep**) Searching for M: is there more information about natural mortality in stock assessments than we realize. *Fish Res.*
- Carvalho, F., A.E. Punt, M.N. Maunder, Y.J., Chang, and **K.R. Piner** (**in prep**) Can diagnostic tests help identify model misspecification? *Fish. Res.*

In the oven

- Kai, M., J., Thorson, **K. Piner**, and M. Maunder (**in review**) Predicting the spatiotemporal distributions of oceanic pelagic sharks in the western and central North Pacific. *Fish. Ocean.*
- McDaniel, J., **K. Piner**, H.H. Lee, and K. Hill. (**in review**) Evidence that the migration of the northern subpopulation of Pacific sardine (*Sardinops sagax*) off the west coast of the United States is age-based *PLoS One*
- Maunder, M., and **K.R. Piner** (**in revision**) Dealing with data conflicts in statistical inference of population assessment models that integrate information from multiple diverse data sets. *Fish. Res.*
- Lee.H.H., L.R., Thomas, **K.R. Piner**, and M.N., Maunder (**in revision**) Effects of age-based movement on the estimation of growth assuming random-at-age and random-at-length data. *J. Fish. Bio.*
- Urbisci, L.C., S.M., Stohs, and **K.R., Piner**. (**in revision**). From sunrise to sunset in the California drift gillnet fishery: An examination of the effects of time and area closures on catch rates of four pelagic species. *Mar. Fish Rev.*

On the table

- Xu, Y., S.L.H., Teo, K.R., **Piner, K**, Chen, and R.J.D., Wells. (**2016**). Using approximate length-conditional approach to estimate Von Bertalanffy growth parameters of north Pacific albacore tuna (*Thunnus alalunga*) *Fish. Res.* 180:138-146
- Piner, K.**, H.H., Lee and M.N. Maunder (**2016**) Evaluation of using conditional age-at-length observations and an equilibrium approximation of the population age structure in fitting the von Bertalanffy growth function. *Fish Res.* 180:128-137
- Maunder, M.N. and **K. R. Piner** (**2015**).Contemporary Fisheries Stock Assessment: many issues still remain. *ICES J. Mar. Sci.* 72 (1):1-6
- Kell, L.T., P. De Bruyn, M. Maunder, **K. Piner**, and I.G. Taylor. (**2014**). Likelihood component profiling as a data exploratory tool for North Atlantic Albacore. *Collect. Vol. Sci. Pap. ICCAT*, 70(3):1288-1293.
- Lee, H.H., **K.R., Piner**, M. Hinton, Y.J., Chang, A., Kimoto, M., Kanaiwa, C.L., Sun, W., Walsh, and G.D., DiNardo (**2014**). Sex-structured population dynamics of blue marlin Makaira nigricans in the Pacific Ocean. *Fish. Sci.* 80:869-878
- Wang, S.P., M.N., Maunder, **K.R., Piner**, A. Aires-da-Silva, and H.H., Lee. (**2014**). Evaluation of virgin recruitment profiling as a diagnostic for selectivity curve structure in integrated stock assessment models. *Fish Res.* 158:158-164.

- Lee, H.H., **K.R., Piner**, R.D., Methot, Jr., and M.N., Maunder (2014). Use of likelihood profiling over a global scaling parameter to structure the population dynamics model: an example using blue marlin in the Pacific Ocean. *Fish.Res.*158:138-146.
- Thomas, L.R., G., DiNardo, H.H., Lee, **K.R., Piner**, and S.E., Kahng (2013). Factors influencing the catch rates of Kona crabs *Ranina ranina* (Brachyura: Raninidae) in the Main Hawaiian Islands. *J. Crust. Biol.* 33(5):633-640
- Piner, K.R.,** H.H., Lee, A., Kimoto, I., Taylor, M. Kanaiwa, and C.L., Sun and (2013). Population dynamics and status of striped marlin (*Kajikia audax*) in the Western and Central North Pacific Ocean. *Mar. Fresh. Res.*.. 64:108-118.
- Haltuch, M., O. Hamel, **K. Piner**, P. McDonald, C. R. Kastelle, and J.Field. (2013) A California current bomb radiocarbon reference chronology and petrale sole age validation. *Can. J. Fish. Aquat. Sci.* 70(1):22-31
- Lee, H.H., M. N. Maunder, **K. R. Piner**, and R. D. Methot (2012). Can steepness of the stock-recruitment relationship be estimated in fishery stock assessment models? *Fish. Res.* (125-126):254-261.
- Lee, H.H., M. N. Maunder, **K. R. Piner**, and R. D. Methot (2012). Repy to 'The reliability of estimates of natural mortality from stock assessment models'. *Fish. Res.* (119-120):133-134.
- Piner, K.R.,** H.H Lee,.M. N. Maunder, and R. D. Methot. (2011). A simulation-based method to determine model misspecificaton: Examples using natural mortality and population dynamics models. *Mar. Coast. Fish.*3:336-343.
- Lee, H.H., M.N. Maunder, **K.R. Piner**, R. D. Methot (2011). Estimating natural mortality within a fisheries stock assessment model: an evaluation using simulation analysis based on twelve stock assessments. *Fish. Res.* 109:89-94
- Dorval, E., **K. Piner**, L. Robertson, C. Reiss, B. Javor, and R. Vetter. (2011). Temperature Record in the Oxygen Stable Isotopic Composition of Pacific Sardine Otoliths: Experimental vs. Wild Stocks from the Southern California Bight. *J. Exp. Mar. Bio Eco.* 397:136-143.
- Brodziak, J. and **K. Piner** (2010) Model Uncertainty and Probable Status of North Pacific Striped Marlin, *Tetrapturus audax*. *Can. J. Fish. Aquat. Sci.* 67(5): 793–805 (doi:10.1139/F10-029).
- Gao, Y., D.L., Dettman, **K.R., Piner**, and F. Wallace (2010). Isotopic Correlation ($\delta^{18}\text{O}$ vs. $\delta^{13}\text{C}$) of Otoliths in Identification of Groundfish Stocks. *Trans. Am. Fish Soc.* 139: 491-501
- Hamel, O., **K.R. Piner** and Wallace, J., (2008). A robust deterministic model describing the bomb radiocarbon bump for use in fish age validation. *Trans. Am. Fish Soc.* 137:852-859.
- Stewart, I.J., and **K.R. Piner** (2007). Simulation of the estimation of the functional form of ageing bias in an integrated stock assessment of canary rockfish using bomb radiocarbon based ages. *Mar. Fresh. Res.* 58(10):905-913.
- Levin, P.S., E.E. Holmes, **K.R. Piner** and C. J., Harvey. (2006). Shifts in a Pacific Ocean fish assemblage: the potential influence of exploitation. *Cons. Biol.* 20 (4): 1181-1190.
- Piner, K.R.,** J.R. Wallace, O.S., Hamel, and R. Mikus (2006). Evaluation of Ageing Accuracy of Bocaccio (*Sebastes paucispinis*) Rockfish Using Bomb Radiocarbon. *Fish. Res.* 77:200-206.
- Piner, K.R.,** M. A., Haltuch and J.R., Wallace. (2005). A preliminary evaluation of the use of oxygen stable isotopes and the 1983 El Nino to assess ageing accuracy of black rockfish (*Sebastes melanops*). *Fish. Bull* 103(3) 553-558.
- Piner, K.R.,** O.S., Hamel, J.L., Menkel, J. R., Wallace and C. E. Huthchinson. (2005). Age validation of canary rockfish (*Sebastes pinniger*) from off the Oregon coast (USA) using the bomb radiocarbon method. *Can. J. Fish. Aquat. Sci.* 62: 1060-1066.
- Piner, K.R.,** and C.M., Jones. (2004). Age, growth and the potential for growth overfishing spot (*Leiostomus xanthurus*) from the Chesapeake Bay, eastern USA. *Mar. Fresh. Res.*55:553-560.
- Piner, K. R.,** and S. G., Wischniowski. (2004). Pacific halibut (*Hippoglossus stenolepis*) chronology of bomb radiocarbon in otoliths from 1944-1981 and a validation of ageing methods. *J. Fish Bio.* 64:1060-1070.
- Ramsey, T. B., T. A. Turk, E. L. Fruh, J. R. Wallace, B. H. Horness, A. J. Cook, K. L. Bosley, D. J. Kamikawa, L. C. Hufnagle Jr., **K. Piner**. (2002). The 1999 Northwest Fisheries Science Center Pacific West Coast upper continental slope trawl survey of groundfish resources off Washington, Oregon, and California. U.S. Dept. of Commerce, NOAA Tech. Memo., NMFS-NWFSC-55, 143p.

Turk, T. A., T. L. Builder, C. W. West, D. J. Kamikawa, J. R. Wallace, R. D. Methot, A. R. Bailey, K. L. Bosley, A. J. Cook, E. L. Fruh, B. H. Horness, **K. Piner**, H. R. Sanborn, W. W. Wakefield. (2001). The 1998 Northwest Fisheries Science Center Pacific West Coast Upper Continental Slope Trawl Survey of Groundfish Resources off Washington, Oregon, and California: Estimates of Distribution, Abundance, and Length Composition. U.S. Dept. of Commerce, NOAA Tech. Memo., NMFS-NWFSC-50, 122 p.

International Scientific Committee Stock Assessment and WG Papers

- Lee, H.H., **Piner, K.R.**, Maunder, M., and A. da-Silva (2016) Development of a Pacific Bluefin stock assessment. ISC/16/PBFWG-1/06
- Lee, H.H., **Piner, K.R.**, Maunder, M.N., and R.D. Methot Jr. (2015) Simulation of methods of dealing with age-based movement in PBF stock assessment. ISC/15/PBFWG-2/06
- Lee, H.H., **Piner, K.R.**, Hebere, H. and J.M. Suter (2015) US Commercial and recreational fleet catch and associated composition data. ISC/15/PBFWG-2/12
- Kai, M., **Piner, K.**, and M.N. Maunder (2015). Use of Geostatistical modelling for CPUE of Japanese shallow-set longline for shortfin mako shark. ISC/15/SharkWG-1/03
- Lee, H.H., Carvalho, F., and **K.R.Piner** (2015). Simulation testing of stock indicators. ISC/15/SharkWG-1/06
- Lee, H.H., **Piner, K.**, Teo, S.L.H., and Kohin, S., (2014) Standardized catch rates of shortfin mako shark in the U.S. West Coast drift gillnet fishery. ISC/14/SHARKWG-03/09
- Maunder, M.N., **Piner, K.R.**, and Aires-da-Silva, A. (2014). Stock status of Pacific Bluefin tuna and the urgent need for management action. IATTC SAC-05-10a.
- Urbisci, L.C., T. Sipple, S. H. Teo, **K.R. Piner** and S. Kohin. (2013) Size composition and spatial distribution of shortfin mako sharks by size and sex in the U.S. West Coast fisheries. ISC/13/SHARKWG-03/01
- Lee, H.H., Chang, Y.J., **Piner, K.R.**, Hinton, M.G., Tagami, D., and I. Taylor (2013). Preliminary blue marlin stock assessment in the Pacific Ocean. ISC/13/BILLWG-02/04
- Lee, H.H., **Piner, K.R.**, Methot, Jr., R.D., and M.N., Maunder (2013). Use of likelihood profiling over a global scaling parameter to structure the population dynamics model: an example using blue marlin in the Pacific Ocean. ISC/13/BILLWG-02/05
- Urbisci, L., Sipple, T., Dewar, H., Kohin S., **Piner, K.**, and R. Runcie. (2013) Examining size-sex segregation among blue sharks (*Prionace glauca*) from the Eastern Pacific Ocean using drift gillnet and satellite tagging data. ISC/13/SHARKWG-1/06
- Teo, S. and **Piner, K.** (2012). Preliminary population dynamics model of Pacific bluefin tuna. ISC/12/PBFWG-3/08.
- Piner, K.** (2012) Selection of an asymptotic selectivity pattern. ISC12-2/PBFWG-2/15
- Lee, H.H., **K.**, **Piner**, I. Taylor (2012). Future Projections of Western and Central Pacific Striped Marlin. ISC/12/BILLWG-1/01
- Piner,K.**, H.H., Lee, I., Taylor, G., DiNardo. (2011). Preliminary striped marlin stock assessment. ISC/11-2/BillWG/01
- Piner, K.**, and H.H., Lee (2011). Meta-analysis of striped marlin natural mortality. ISC/11-1/BillWG/08
- Piner, K.**, H.H., Lee, I., Taylor, A. Aires-da-Silva, and S., Teo (2011). Introduction of a spatially structured model of Pacific bluefin tuna. ISC/11-1/PBFWG/06
- Piner, K.** and H.H. Lee (2010) Review of biological reference points with specific recommendations for North Pacific Billfishes. ISC/10/BillWG-1/08
- Courtney, D. and **K. Piner** (2009) Age Structured Stock Assessment of North Pacific Swordfish (*Xiphias gladius*) with Stock Synthesis under a Two Stock Scenario. ISC/10/BILLWG-1/01
- Courtney, D. and **K. Piner** (2009) Age Structured Stock Assessment of North Pacific Swordfish (*Xiphias gladius*) with Stock Synthesis under a Single Stock Scenario ISC/09/BillWG-2/09/07
- Courtney, D. and **K. Piner** (2009) Preliminary Age Structured Stock Assessment of North Pacific Swordfish (*Xiphias gladius*) with Stock Synthesis under a Two Stock Scenario ISC/09/BillWG-2/09/08
- Courtney, D. L., and **K. Piner**. (2009). Preliminary Stock Synthesis Model Sensitivity Runs for a North Pacific Swordfish (*Xiphias gladius*) Stock Assessment. ISC/09/BILLWG-2/05.

- Piner, K.**, and A. Betcher (2009) CPUE time series from the California driftnet fishery, 1985-present. Busan, S. Korea. ISC/09/BillWG-2/09
- Piner, K.**, (2009) Size composition of the California driftnet fishery, 1981-present. Busan, S. Korea. ISC/09/BillWG-2/06
- Courtney, D., and **K. Piner** (2009) Preliminary stock synthesis model sensitivity runs for a North Pacific swordfish (*Xiphias gladius*) stock assessment. Busan, S. Korea. ISC/09/BillWG-2/05
- Piner, K.**, and A. Betcher. (2009). Preliminary CPUE time series from the California swordfish driftnet fishery, 1990-present. Honolulu, USA. ISC/09/BILLWG-1/5
- Brodziak, J. and **Piner, K.** (2009). Model uncertainty and biological reference points for North Pacific striped marlin. Honolulu, USA. ISC/09/BILLWG-1/2
- Piner, K.**, H.H., Lee, and Aires-da-Silva, A. (2008) The estimate of unfished bluefin spawning stock biomass: the result of density-dependent processes? Ishigaki, Japan. ISC/08/PBF-WG/01
- Piner, K.**, H.H., Lee, M., Maunder, and Aires-da-Silva, A. (2008) Simulation of the estimation of M as a model mis-specification diagnostic. Ishigaki, Japan. ISC/08/PBF-WG/02.
- Lee, H.H., **K. Piner**, and R. Conser (2008). Estimation of population size for Pacific bluefin tuna using bayesian production models. Ishigaki, Japan. ISC/08/PBF-WG/03.
- Aires-da-Silva, A., M., Maunder, **K. Piner**, and H.H., Lee. (2008) An evaluation of the natural mortality schedule assumed in the PBF stock assessment and proposed changes for adult natural mortality. Ishigaki, Japan. ISC/08/PBF-WG/04.
- Brodziak, J. and **K., Piner** (2008). Maximum sustainable yield-based reference points for north Pacific Striped Marlin, *Tetrapturus audax*. Abashiri, Japan. ISC/08/Bill-WG/06
- Piner, K.** and Conser, R. (2007). Estimation of the ratio of spawning biomass of striped marlin above 20°N. Honolulu, USA ISC/08/Bill-WG/06
- Piner, K.** (2007). Option to introduce age data into SSII. Shimizu, Japan. ISC/07/PBF-3/20
- Piner, K.**, R., Conser, G., DiNardo, and J., Brodziak. (2007). Evaluation of Model Performance from the 2007 ISC Striped Marlin Stock Assessment Meeting . Busan, Korea. ISC/07/SM-WG/04
- Piner, K.** and J., Larese (2007). Re-examination of the CPFV recreational logbook data for potential use in estimating an index of abundance. PBF-WG Shimizu Japan ISC/PBF-WG-3/19
- Piner, K.**, Conser, R., Dinardo, G., and Brodziak, J. (2007). SS2 sensitivity runs for striped marlin assessment WG 2007. Taipei, Chinese Taipei. ISC/07/SM-WG/02
- Piner, K.** Conser, R., and G., DiNardo. (2006). Stock Status of striped marlin in the north Pacific Ocean in 2005. International Science Committee, La Jolla, California. ISC/06/SM-WG/07
- Piner, K.**, Conser, R. Lee, H. and S., Hoyle. (2006). Evaluation of the use of the fully integrated Length-structured stock assessment model Stock Synthesis II for use in modeling northern bluefin tuna. International Science Committee, Shimizu, Japan. ISC/06/PBF-WG/19
- Piner, K.**, Conser, R., and Hoyle. S., (2006). Bluefin tuna CPUE index derived from commercial passenger fishing vessel logbooks 1936-2004. International Scientific Committee, Shimizu Japan. ISC/06/PBF-WG/12
- Hoyle, S., and **Piner, K.**, (2006). Habitat-based index and standardized index of catch per unit effort derived from captains logbooks and observer records for purse-seine vessels fishing between 1960 and 2005. International Scientific Committee, Shimizu Japan. ISC/06/PBF-WG/11

Pacific Fishery Management Council Stock Assessment Papers

- Piner, K.R.**, E.J., Dick, and J. Field. 2005. Stock Status of Cowcod in the the Southern California Bight and future prospects. Appendix in Pacific Fishery Management Council. Status of the Pacific Coast groundfish fishery through 2005 and recommended acceptable biological catches for 2007: stock assessments and fishery evaluation. Pacific Fishery Management Council, Portland, Oregon.
- Piner, K.R.** 2005. Cowcod Rebuilding Analysis: Analysis of the progress towards rebuilding. Appendix in Pacific Fishery Management Council. Status of the Pacific Coast groundfish fishery through 2005 and recommended acceptable biological catches for 2007: stock assessments and fishery evaluation. Pacific Fishery Management Council, Portland, Oregon.

- Cope, J., **K. Piner**, C. Minte-Vera, and A. Punt. Stock Status of Cabezon in 2003. Appendix in Pacific Fishery Management Council. Status of the Pacific Coast groundfish fishery through 2003 and recommended acceptable biological catches for 2004: stock assessments and fishery evaluation. Pacific Fishery Management Council, Portland, Oregon.
- Methot, R., F. Wallace, and **K.R. Piner**. 2002 Stock Status of Yelloweye Rockfish off the West Coast of the United States 2002. Appendix in Pacific Fishery Management Council. Status of the Pacific Coast groundfish fishery through 2002 and recommended acceptable biological catches for 2003: stock assessments and fishery evaluation. Pacific Fishery Management Council, Portland, Oregon
- Methot, R., and **K.R. Piner**. 2002. Rebuilding Analysis of Yelloweye Rockfish. Appendix in Pacific Fishery Management Council. Status of the Pacific Coast groundfish fishery through 2002 and recommended acceptable biological catches for 2003: stock assessments and fishery evaluation. Pacific Fishery Management Council, Portland, Oregon
- Methot, R. and **K.R. Piner** 2002 Stock Status of Canary Rockfish off the West Coast of the United States 2001. Appendix in Pacific Fishery Management Council. Status of the Pacific Coast groundfish fishery through 2002 and recommended acceptable biological catches for 2003: stock assessments and fishery evaluation. Pacific Fishery Management Council, Portland, Oregon
- Methot, R. and **K.R. Piner** 2002 Canary Rockfish Rebuilding Analysis. Appendix in Pacific Fishery Management Council. Status of the Pacific Coast groundfish fishery through 2002 and recommended acceptable biological catches for 2003: stock assessments and fishery evaluation. Pacific Fishery Management Council, Portland, Oregon
- Piner, K.R.** and R. Methot. 2001. Stock Status of Shortspine Thornyhead off the West Coast of the United States 2001. Appendix in Pacific Fishery Management Council. Status of the Pacific Coast groundfish fishery through 2000 and recommended acceptable biological catches for 2001: stock assessments and fishery evaluation. Pacific Fishery Management Council, Portland, Oregon.
- J. Rogers, R. Methot, T. Builder, and **K.R. Piner**. 2000. Status of Darkblotched Rockfish off the West Coast. Appendix in Pacific Fishery Management Council. Status of the Pacific Coast groundfish fishery through 1999 and recommended acceptable biological catches for 2000: stock assessments and fishery evaluation. Pacific Fishery Management Council, Portland, Oregon.
- Piner, K. R.**, M. Schirripa, J. Rogers, T. Builder, and R. Methot. 2000. Status of Bank rockfish off California 2000. Appendix in Pacific Fishery Management council. Status of the Pacific Coast groundfish fishery through 1999 and recommended acceptable biological catches for 2001: stock assessment and fishery evaluation. Pacific Fishery Management Council, Portland, Oregon.
- Crone, P., **K. R. Piner**., R. Methot., and T. Builder. 1999 Status of the Canary Rockfish Resource off Oregon and Washington in 1999. Appendix in Pacific Fishery Management Council. Status of the Pacific Coast groundfish fishery through 1998 and recommended acceptable biological catches for 2000: stock assessment and fishery evaluation. Pacific Fishery Management Council, Portland, Oregon.